Woods End Laboratories, Inc.

290 Belgrade Road, P.O. Box 297
Mount Vernon, ME 04352/USA
207-293-2457 www.woodsend.org lab@woodsend.org

Account: 2277
· James Bunchuck
· Town of Southold
· PO Box 962
· Cutchogue NY 11935

Code: Project:
Date Received : 2016-02-15
Date Reported : 2016-02-29
Lab ID Number : 9706.0
Quality Control : RS

COMPOSITION ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

VARIABLE MEASURED	Unit	dry basis	as is basis	Notations †
Bulk Density	$lbs{\cdot}ft^3$	-	41	1095 lbs/yd^3
Total Solids (dry matter)	%	100.0	38.1	762 lbs/ton
Moisture Content	%	0.0	61.9	148 gals/ton
Water Holding Capacity (*calc*)	%	146	59	142 gals/ton
Inert and Oversize Particles	%	⇝	12.8	256.8 lbs/ton
pH (sat. paste in H_2O)	$-\log H^+$	⇝	7.44	Near Neutral
Free Carbonates (CO_3)	(Range 1-3)	⇝	1	None
Total Organic Matter	%	44.0	16.8	335 lbs/ton
Conductivity (salinity)	$dS{\cdot}m^{-1}$	⇝	0.9	V Low
Total Carbon:Nitrogen (C:N) Ratio	w:w	18.3	18.3	Med High
Seedling Response Assay, Biological Stability				
Seedling Germination	%	⇝	100	Not Plant-toxic
Seedling Vigor	% of control	⇝	96	Excellent
Cress Emergence	% of total	⇝	100	No Inhibition
Cress Biomass	% of Control	⇝	52	Passing
Auxinic Effects	Ranking 1-6	⇝	0.0	Non Observed
Germinable Weeds	#/liter	⇝	0	weed-free
Respiration, Volumetric	(Solvita 1-8)	⇝	6.93	Med-Low
Ammonia Volatization	(Solvita 1-5)	⇝	5.00	low or none

†For explanation of data, see Woods End Laboratories, Inc. Interpretation Sheet at www.woodsend.org

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MINERALS ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

VARIABLE MEASURED	Unit	dry basis	as is basis	pounds/ton *as is*
Mineral Nutrients				
Total Nitrogen	%	1.301	0.496	9.9 M
Phosphorus (P) *total*	%	0.923	0.352	7.0 M
Extractable & Total Cations				
Potassium (K) *total*	%	0.25	0.10	1.9
Sodium (Na) *total*	%	0.06	0.02	0.5
Calcium (Ca) *total*	%	3.25	1.24	24.8
Magnesium (Mg) *total*	%	0.50	0.19	3.8
Extractable Anions				
Nitrate (NO_3-N)*soluble*	ppm	406	154	0.3
Nitrite (NO_2-N) *soluble*	ppm	10.5	4.0	-
Chloride (Cl) *soluble*	ppm	1179	449	0.9
Sulfate (SO_4–S) *soluble*	ppm	10	4	0.0

Notes: percent x 10,000 = ppm; ppm = mg/kg; < = less than the MLD (minimum level of detection); nd = none detected

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METALS and NON-METALS ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

VARIABLE MEASURED	Unit	dry basis	as is basis†	lbs/ton Rating‡*as is*
Copper (Cu)	$mg{\cdot}kg^{-1}$	41	16	<0.1 Low
Manganese (Mn)	$mg{\cdot}kg^{-1}$	527	200.9	130.6 High
Iron (Fe)	$mg{\cdot}kg^{-1}$	2390	911	591.9 MH
Zinc (Zn)	$mg{\cdot}kg^{-1}$	2	1	<0.1 V Low
Lead (Pb)	$mg{\cdot}kg^{-1}$	51.0	-	-
Chromium (Cr)	$mg{\cdot}kg^{-1}$	47.5	-	-
Cadmium (Cd)	$mg{\cdot}kg^{-1}$	2.4	-	-
Nickel (Ni)	$mg{\cdot}kg^{-1}$	5.4	-	-

Notes: $mg{\cdot}kg^{-1}$ = ppm (parts per million); MPN = most probable number

< signifies *less than MLD* (minimum level of detection) for the particular factor tested

† "as is" = wet basis ‡ Rating of Metals Based on international soil standard and is not a Sludge Rule EPA503 process

Auxinic Herbicide Bioassay Report

Woods End® Laboratories INCORPORATED
PO Box 297 -
Mt Vernon MAINE 04352
207-293-2 457 fx 293-2488

Customer: 2277

Town of Southold
James Bunchuk
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Cutchogue, NY 11935

Date entered: February 29, 2016

Unit	Sample Description	Lab ID	Sample wet density g/cc	% v/v Sample in Medium[a]	actual % sample w/w	Injury Symptomology for Red Clover by Observer[b] RS	KO	JD	Mean Injury Ranking
1	*Compost: 16 1, decomposed leaves, woodchips, manure*	9706.0	1	50.0	81.3	n	n	n	0.0
2									
3									
4									
5									
6									

Spearman Rank Correlation of Evaluators (r_s):

Observed Effect Key:	Inury Ranking	[b] Description of observed injury	Notation
Initials denote visual symptom	n = 0	none = no symptoms observed	Estimated level of plant injury based on the scale of ranking 0 - 5 in severity
	sl = 1	Slight = slight leaf curl, first observed level	
	s-m = 1.5	Slight-Mod - less than a moderate effect	
	m = 2.0	Moderate leaf curl - very noticable	
	msv = 2.5	Mod-Severe - less than a severe effect	
	sv = 3.0	Severe = pronounced leaf curl and distortion	
	ex = 4	Extreme - close to total inhibition	

[a] % sample employed in medium on volume blending basis

Estimated Mean Concentration in Source Material

*(ppb - based on known minimum level of detection)***

	Lab ID	Effects	RS	KO	JD	MLD?	MEAN	Stdev ↕
1	9706.0	<	4	4	4	<	3.7	0.0

▸ Disclaimer re Clopyralid Equivalents

*** level of estimated herbicide is based on calibration assays with clopyralid herbicide. The herbicide has not been directly analysed. Any other auxinic herbicide may have caused a similar effect but at another higher or lower concentration.*

If MLD note "<" is present it means the lowest value is beneath detectability

↕ Standard Deviation is plus/minus value for range of possibility due to observed injury

Woods End® Laboratories INCORPORATED

Compost Auxinic Risk Analysis

PO Box 297 -
Mt Vernon MAINE 04352
207-293-2 457 fx 293-2488

RESIDUE ADVISORY LEVEL FOR COMPOST PRODUCT

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)	Level Noted
1	9706.0	N	N	N	4

N- no warning, SL Cautionary, M Warning, SV Danger, ** Extreme Warning

FIELD (TON/ACRE) APPLICATION RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)
1	9706.0	200	100	50

GARDEN (cu.ft/100 sq.ft) APPL. RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes,Clover)
1	9706.0	25	25	12